

**WHAT IS CLAIMED IS:**

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1. A composition, comprising:  
a curable unsaturated compound;  
a curing agent; and  
an adhesion promoter, wherein the composition has a peak exotherm of less than about 50°C (120°F).
  2. A composition according to claim 1, further comprising a non-curable diluent.
  3. A composition according to claim 1, wherein the curable unsaturated compound comprises at least one unsaturated group selected from the group consisting of methacrylate, acrylate, vinyl and combinations thereof.
  4. A composition according to claim 3, wherein the unsaturated group is methacrylate.
  5. A composition according to claim 1, wherein the curable unsaturated compound is an oligomer.
  6. A composition according to claim 5, wherein the oligomer is a dimethacrylate oligomer.

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7. A composition according to claim 6, wherein the dimethacrylate oligomer is selected from the group consisting of MLU-340, MLU-341 and MLU-342.
  8. A composition according to claim 5, wherein the oligomer has a molecular weight of greater than about 1050.
  9. A composition according to claim 5, wherein the oligomer has a molecular weight of between from 1000 to about 5000.

10. A composition according to claim 1, wherein the peak exotherm is from about 20°C to about 45°C.

11. A composition according to claim 1, wherein the peak exotherm is from about 35°C to about 40°C.

~~12. A composition according to claim 1, wherein the curable unsaturated compound has an unsaturation index greater than or equal to 500.~~

~~13. A composition according to claim 1, wherein the curable unsaturated compound has an unsaturation index of from about 600 to about 1500.~~

~~14. A composition according to claim 1, wherein the curable unsaturated compound has an unsaturation index of from about 600 to about 1200.~~

15. A composition according to claim 1, wherein the adhesion promoter is selected from the group consisting of poly(acrylic acid), poly(ethylene oxide), poly(vinyl pyrrolidone), poly(maleic anhydride-co-methyl vinyl ether), karaya gum, guar gum, acacia gum, carboxypolymethylene, chitosan, hydroxyethyl cellulose, sodium carboxymethylcellulose, hydroxypropyl cellulose, polycarbophil, poly(vinyl alcohol), hydroxypropylmethyl cellulose and compatible combinations thereof.

16. A composition according to claim 1, wherein the adhesion promoter is polycarbophil.

~~17. A composition according to claim 1, wherein the adhesion promoter has a molecular weight of greater than about 100,000.~~

18. A composition according to claim 1, wherein the curing agent is a photoinitiator.

19. A composition according to claim 1, further comprising a bioadhesion synergist.
20. A composition according to claim 19, wherein the bioadhesion synergist is a divalent metal or an alkali metal ion.
21. A composition according to claim 17, wherein the adhesion synergist is selected from the group consisting of zinc oxide and anhydrous dicalcium phosphate.
22. A composition according to claim 1, wherein after curing the composition is a flexible bioadhesive.
23. A composition according to claim 1, further comprising a curing agent synergist.
24. A composition according to claim 23, wherein the curing agent synergist is ethyl-4-dimethylaminobenzoate.
25. A composition according to claim 1, further comprising a silica thickener.
26. A composition according to claim 1, wherein the composition is substantially free of monomers.
27. A composition according to claim 1, wherein the composition is monomer-free.
28. A composition according to claim 2, wherein the non-curable diluent has a viscosity of from about 1 centipoise to about 2000 centipoise.

29. A curable composition according to claim 1, further comprising a light-attenuating pigment.

30. A curable composition according to claim 29, wherein the light-attenuating pigment is selected from the group consisting of titanium dioxide and zinc oxide.

31. A composition according to claim 29, wherein the light-attenuating pigment is present from about 0.0001 percent to about 10 percent by weight of the composition.

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Sub A3 32. A two part composition, comprising:  
a first part comprising  
a curable unsaturated compound, an adhesion promoter and a curing agent, and  
a second part comprising  
a curable unsaturated compound, and a curing agent synergist of the curing agent of the first part, wherein upon mixing of the first part and the second part curing takes place with a peak exotherm of less than about 50°C (120°F).

33. A composition according to claim 32, wherein the curing agent is a benzoyl peroxide and the curing agent synergist is N,N-dimethyl-p-toluidine.

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Sub B3 34. A method for forming a flexible bioadhesive on a tissue, comprising:  
contacting the tissue with a composition comprising a curable unsaturated compound, a curing agent and an adhesion promoter, wherein the composition has a peak exotherm of less than about 50°C (120°F), and  
curing the composition to form the flexible bioadhesive on the tissue.

35. A method according to claim 34, wherein the tissue is selected from the group consisting of skin, mucosa, internal organs, bone, tendon, cartilage, enamel, dentin, and fingernails.

36. A flexible bioadhesive on a tissue surface prepared by the method of claim 34.

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37. A composition, comprising:  
a curable unsaturated compound, and  
a curing agent, wherein the composition has a peak exotherm of less than about  
50°C (120°F).

38. A composition according to claim 37, further comprising a non-curable diluent.

39. A composition according to claim 37, wherein the curable unsaturated compound  
comprises at least one unsaturated group selected from the group consisting of  
methacrylate, acrylate, vinyl and combinations thereof.

40. A composition according to claim 39, wherein the unsaturated group is  
methacrylate.

41. A composition according to claim 37, wherein the curable unsaturated  
compound is an oligomer.

42. A composition according to claim 41, wherein the oligomer is a dimethacrylate  
oligomer.

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43. A composition according to claim 42, wherein the dimethacrylate oligomer is  
selected from the group consisting of MLU-340, MLU-341 and MLU-342.

44. A composition according to claim 41, wherein the oligomer has a molecular  
weight of greater than about 1050.

45. A composition according to claim 41, wherein the oligomer has a molecular  
weight of between from 1000 to about 5000.

46. A composition according to claim 37, wherein the peak exotherm is from about 20°C to about 45°C.

47. A composition according to claim 37, wherein the peak exotherm is from about 35°C to about 40°C.

48. A composition according to claim 37, wherein the curable unsaturated compound has an unsaturation index greater than or equal to 500.

49. A composition according to claim 37, wherein the curable unsaturated compound has an unsaturation index of from about 600 to about 1500.

50. A composition according to claim 37, wherein the curable unsaturated compound has an unsaturation index of from about 600 to about 1200.

51. A composition according to claim 37, wherein the composition is substantially free of monomers.

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AS 52. A composition comprising a methacrylated polyetherurethane oligomer (MLU-340), capric/caprylic triglyceride, polycarbophil, camphorquinone, and ethyl-4-dimethylaminobenzoate.

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53. A composition according to claim 52, further comprising fumed silica.

54. A composition according to claim 52, further comprising zinc oxide.

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AG 55. A composition according to claim 52, wherein the composition comprises methacrylated polyetherurethane oligomer (MLU-340) in an amount from about 25 percent to about 98 percent by weight based on the total weight of the composition, capric/caprylic triglyceride in an amount from about 2 percent to about 50 percent by weight based on the total weight of the composition, polycarbophil in an amount from

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